

ARB Tools for Public Access to Air Quality Information



Air Resources Board
California Environmental Protection Agency



Introduction

- ♦ **ARB is expanding public access to program information, using technology and community-based outreach**
- ♦ **Presentation focuses on new technological tools to improve public access to air quality and emissions information**



Highlighted Tools

- ◆ **Air quality data - AQMIS**

- Includes air quality monitoring and meteorology data

- ◆ **Emission data - CHAPIS**

- Maps sources and emissions that contribute to air pollution

- ◆ **Health status data**

- Provides links to Department of Health Services



AQMIS and CHAPIS

On ARB's Web Pages

- ◆ **Several options for accessing tools**
 - ◆ **Air Quality and Emissions page**
 - ◆ **ARB Databases page**
 - ◆ **Community Health page**

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ARB's Community Health

**What's the pollution situation in my town? In my neighborhood?
Find air monitoring results here.**



Community Maps

These map-based programs allow you to answer key questions about the air pollution in your neighborhood.

- > [What Is Your Health Risk?](#)
- > [What Sources Are Near You? \(CHAPIS\)](#)
- > [Air Quality Information](#)

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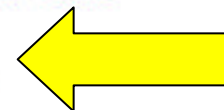
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**Air Quality
Data and
Maps**

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**CHAPIS
Emission
Maps**



Air Quality Data and Mapping Tools



AQMIS

- ♦ Air Quality and Meteorological Information System
- ♦ Provides “real time” data
- ♦ Includes data for 200 ARB and district monitoring sites statewide
- ♦ Key pollutants are ozone and particulate matter

AQMIS Air Quality sites



-ARB

-Local Districts

-Federal Agencies



Uses of AQMIS

- ◆ **Provides up-to-date air quality information**
- ◆ **Provides data for smoke management decisions**
- ◆ **Supports emergency response modeling**
- ◆ **Provides ozone trends for recent years**

AQMIS home page

California Air Resources Board

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AQMIS

**Latest
Ozone Air Quality**

**Recent Year's
Ozone Air Quality**

Real-Time Query Tool

Map Pages



This shows information on maximum ozone concentrations for yesterday, today, and for the year so far, for selected areas within the state.

This shows information on ozone exceedances for the last three years and includes exceedances so far in the current year, for selected areas within the state. The results can be viewed at site level if desired.

This query tool allows you, the user, to select real-time air quality or meteorological data, a time frame, an area of the state, and the type of report. Results can be clicked through for more detail.

This shows the most recent air quality on a map. The user can zoom to a particular geographic area, can change to another day or hour, and can see features such as roads and schools.

[About AQMIS](#)

Please send questions or comments to: aqmis@arb.ca.gov

12

Today



Data are preliminary

Sacramento Metropolitan Area Hourly 1 Hour Average Ozone 03/08/2006 MIDDAY Parts Per Million (ppm)													
					<<< Hours 00-07		Hours 08-15		Hours 16-23 >>>			Whole Day	
Bas	Cnty	Site Name	Day's Max	Day's Avg	08 - 09	09 - 10	10 - 11	11 - 12	12 - 13	13 - 14	14 - 15	15 - 16	GraphIt
MC	ED	Placerville-Gold Nugget Way	0.037	0.032	0.022	0.026	0.032	0.037	0.037				<input type="checkbox"/>
MC	PLA	Colfax-City Hall	0.04	0.025	0.027			0.039	0.040				<input type="checkbox"/>
SV	PLA	Roseville-N Sunrise Blvd	0.033	0.014	0.011	0.014	0.020	0.020	0.033				<input type="checkbox"/>
SV	SAC	Elk Grove-Brucerville Road	0.042	0.02	0.026	0.028	0.036	0.042					<input type="checkbox"/>
SV	SAC	Folsom-Natoma Street	0.037	0.021	0.012	0.020	0.023	0.030	0.030	0.037			<input type="checkbox"/>
SV	SAC	North Highlands-Blackfoot Way	0.041	0.023	0.006	0.018	0.028	0.033	0.036	0.041			<input type="checkbox"/>
SV	SAC	Sacramento-3801 Airport Road	0.033	0.011	0.007	0.020	0.021	0.027	0.031	0.033			<input type="checkbox"/>



Last Week



Latest Ozone Summary for Selected Regions (Preliminary Data)

Region	So Far Today (03/08/2006)		Yesterday (03/07/2006)		7 Days ending (03/07/2006)		This Year-to-Date through 03/07/2006	
	Max 1hr (ppm)	Latest hr (PST)	Max 1hr (ppm)	Max 8hr (ppm)	Max 1hr (ppm)	Max 8hr (ppm)	Max 1hr (ppm)	Max 8hr (ppm)
Sacramento Metropolitan Area*	0.04	13	0.05	0.05	0.06	0.05	0.06	0.06
San Diego Air Basin	0.05	13	0.05	0.05	0.06	0.06	0.08	0.07
San Francisco Bay Area Air Basin	0.04	13	0.04	0.04	0.09	0.04	0.09	0.05
San Joaquin Valley Air Basin	0.05	13	0.04	0.04	0.05	0.05	0.08	0.07
South Coast Air Basin	0.05	13	0.05	0.05	0.07	0.06	0.07	0.06
Ventura County (Mainland Only)	N/A	N/A	0.05	0.05	0.06	0.05	0.07	0.05

Last Year



Annual Ozone Summaries for Selected Regions

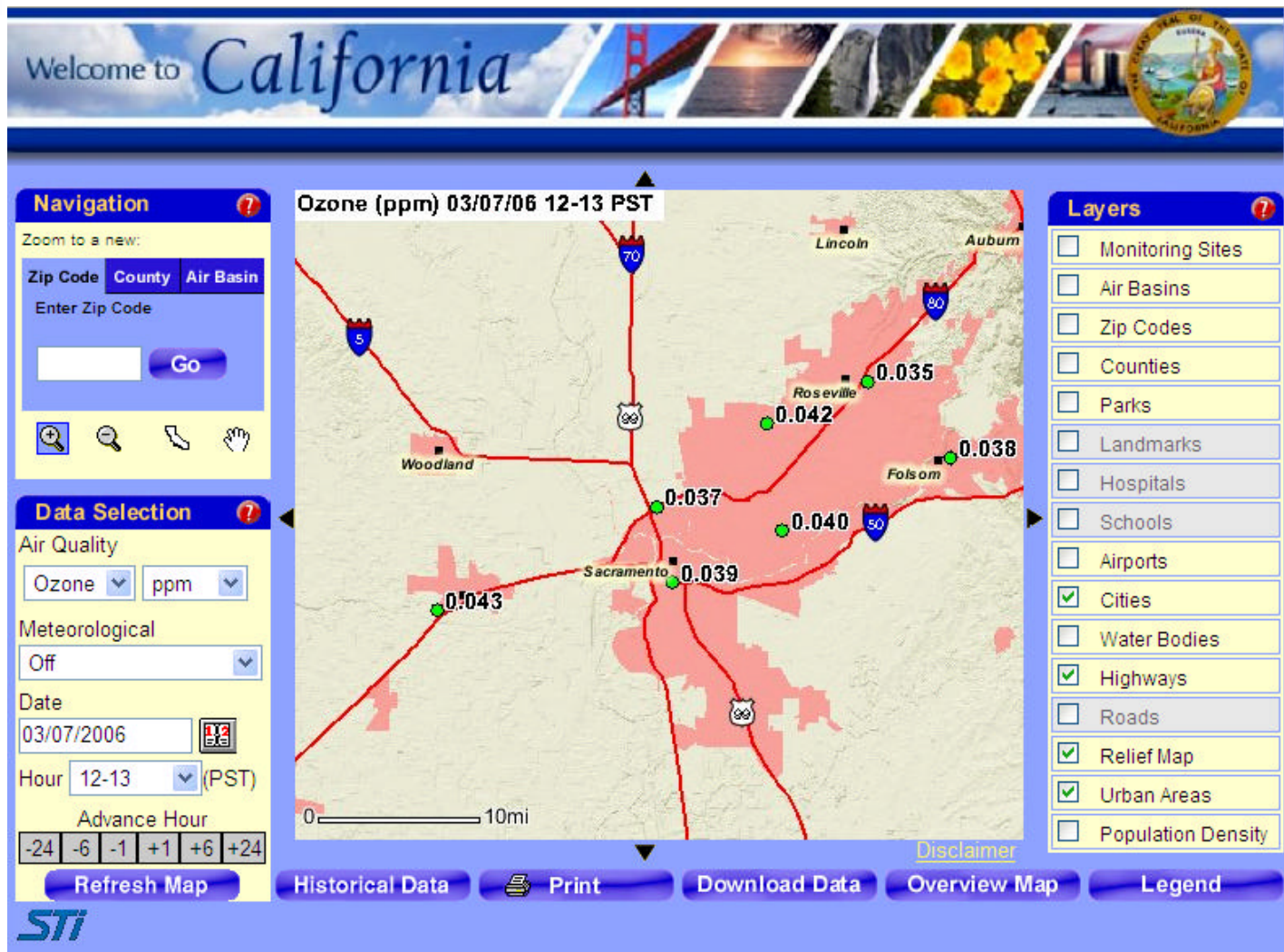
Year 2003, 2004 and 2005 are whole years

Year 2006 data are through 03/07/2006

[Click Here](#) to view data for all years through the same date

Region	Year	Exceedance Days**			Maximum Concentration (ppm)		National Design Value (ppm)	
		State	National					
		1-hr	1-hr	8-hr	1-hour	8-hour	1-hour	8-hour
Sacramento Metropolitan Area***	2003	53	6	43	0.15	0.12	0.143	0.107
	2004	35	0	25	0.12	0.10	0.142	0.102
	2005*	42	4	35	0.13	0.12	N/A	N/A
	2006*	0	0	0	0.06	0.05	N/A	N/A

Interactive AQMIS maps





Future Directions for AQMIS

- ◆ **Expand data sources**
- ◆ **Add additional data summaries**
- ◆ **Enhance mapping capability**
- ◆ **Create advanced tools to serve special needs**



Emission Mapping Tools



CHAPIS (Community Health Air Pollution Information System)

- ◆ Evolved out of Community Health and Environmental Justice outreach
- ◆ Community interest in mapping sources of emissions in their neighborhood
- ◆ Important to combine transportation sources, industrial/commercial facilities, and consumer products
- ◆ Multiyear effort, collaboration with districts



CHAPIS Components

- ◆ **Maps sources and amounts of emissions**
- ◆ **Uses interactive web-based mapping**
 - **Geographic information system (GIS) tools**
- ◆ **Includes mobile, areawide, and industrial/commercial sources**
- ◆ **Provides maps and underlying data**

CHAPIS: Pick an Area of Interest – by Zip, County, Basin, District, Regions

California

California Air Resources Board

CHAPISCommunity Health Air Pollution Information System

Welcome to CHAPIS - The Community Health Air Pollution Information SystemLast Updated June 1, 2004

The California Air Resources Board (ARB) developed CHAPIS as an Internet-based tool to provide a graphical way to look at the amounts and spatial distribution of air pollution emission sources in California. CHAPIS provides a mapping tool to analyze the spatial characteristics of California's Air Pollutant [Emission Inventory](#), for emissions of [traditional criteria air pollutants](#) and key [toxic air pollutants](#). This is a prototype, showing [selected data](#) from the ARB and [local Districts](#), for [point source](#), [mobile source](#), and [dispersed source](#) emissions data. For online help or more information about CHAPIS, click [here](#). To begin using CHAPIS, select an area of interest using the menus or map provided below.

Select an Area of Interest:

Select an area of interest using the menus below or use the map, and click on the county of your choice.

County:

Air Basin:


Air District:

Region:

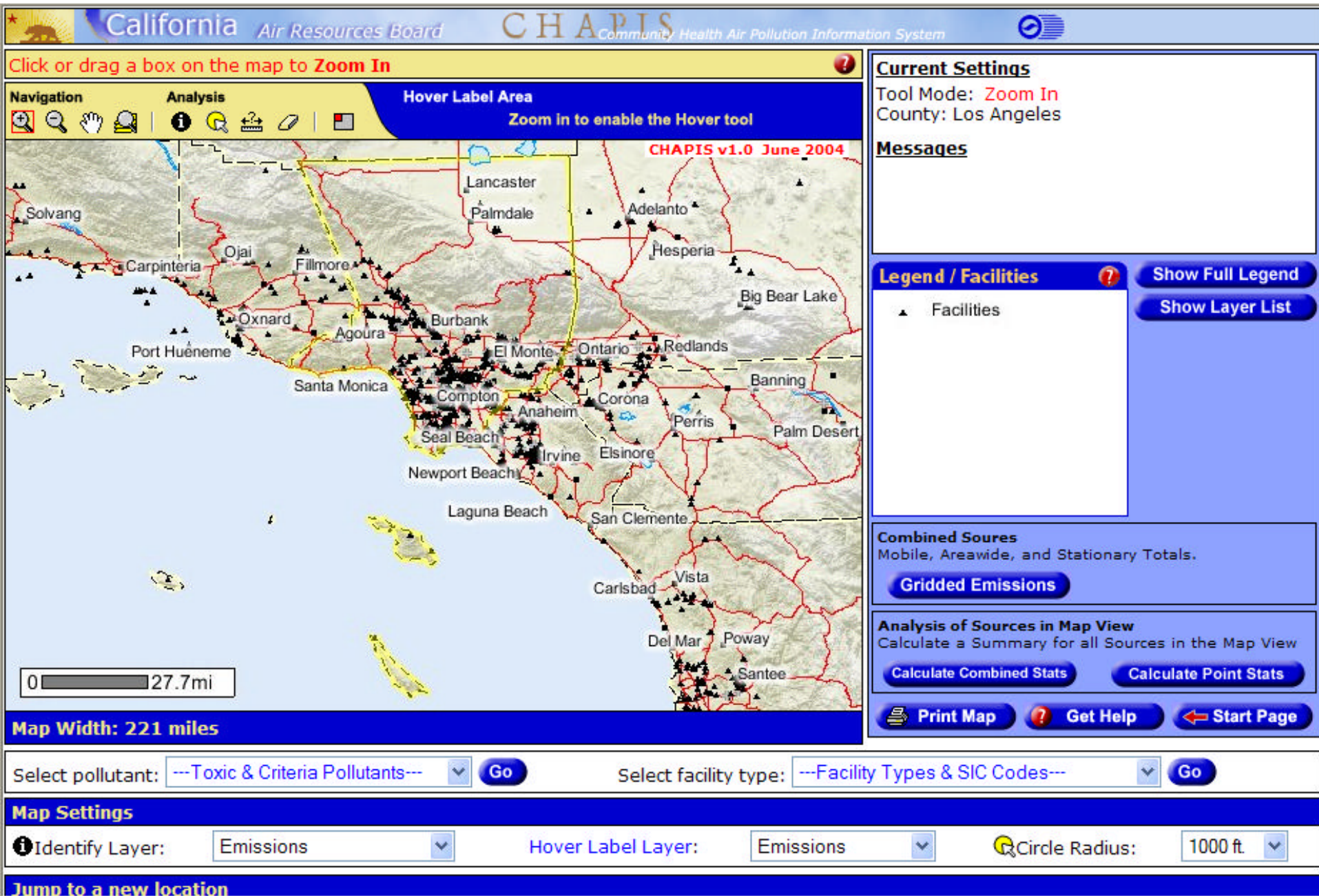
Or Enter a Zip Code:

Go To Zip

* This website is best viewed with your screen area set to 1024 x 768 px.



Website developed by VESTRA Resources Inc. VESTRA



Pick a pollutant,

The screenshot displays the CHAPIS web application interface. A yellow arrow points to the 'Zoom In' button in the top left navigation bar. The map shows Southern California with various cities labeled. The right side of the interface contains several panels: 'Current Settings' showing 'Tool Mode: Zoom In' and 'County: Los Angeles'; 'Messages'; 'Legend / Facilities' with a 'Show Full Legend' button; 'Combined Sources' with a 'Gridded Emissions' button; and 'Analysis of Sources in Map View' with buttons for 'Calculate Combined Stats' and 'Calculate Point Stats'. At the bottom, there are 'Map Settings' for 'Identify Layer' and 'Hover Label Layer', both set to 'Emissions', and a 'Circle Radius' of '1000 ft'. The bottom status bar shows 'Map Width: 221' and 'Select pollutant: Reactive Organic Gases (ROG)'.

Pick a pollutant, then zoom in

California Air Resources Board CHAPAS Community Health Air Pollution Information System

Click or drag a box on the map to **Zoom In**

Navigation **Analysis** **Hover Label Area**
Zoom in to enable the **Hover Label** tool

IS v1.0 June 2004

Current Settings
Tool Mode: **Zoom In**
County: Los Angeles

Messages

Legend / Facilities **Show Full Legend**
▲ Facilities **Show Layer List**

Combined Sources
Mobile, Areawide, and Stationary Totals.
Gridded Emissions

Analysis of Sources in Map View
Calculate a Summary for all Sources in the Map View
Calculate Combined Stats **Calculate Point Stats**

Print Map **Get Help** **Start Page**

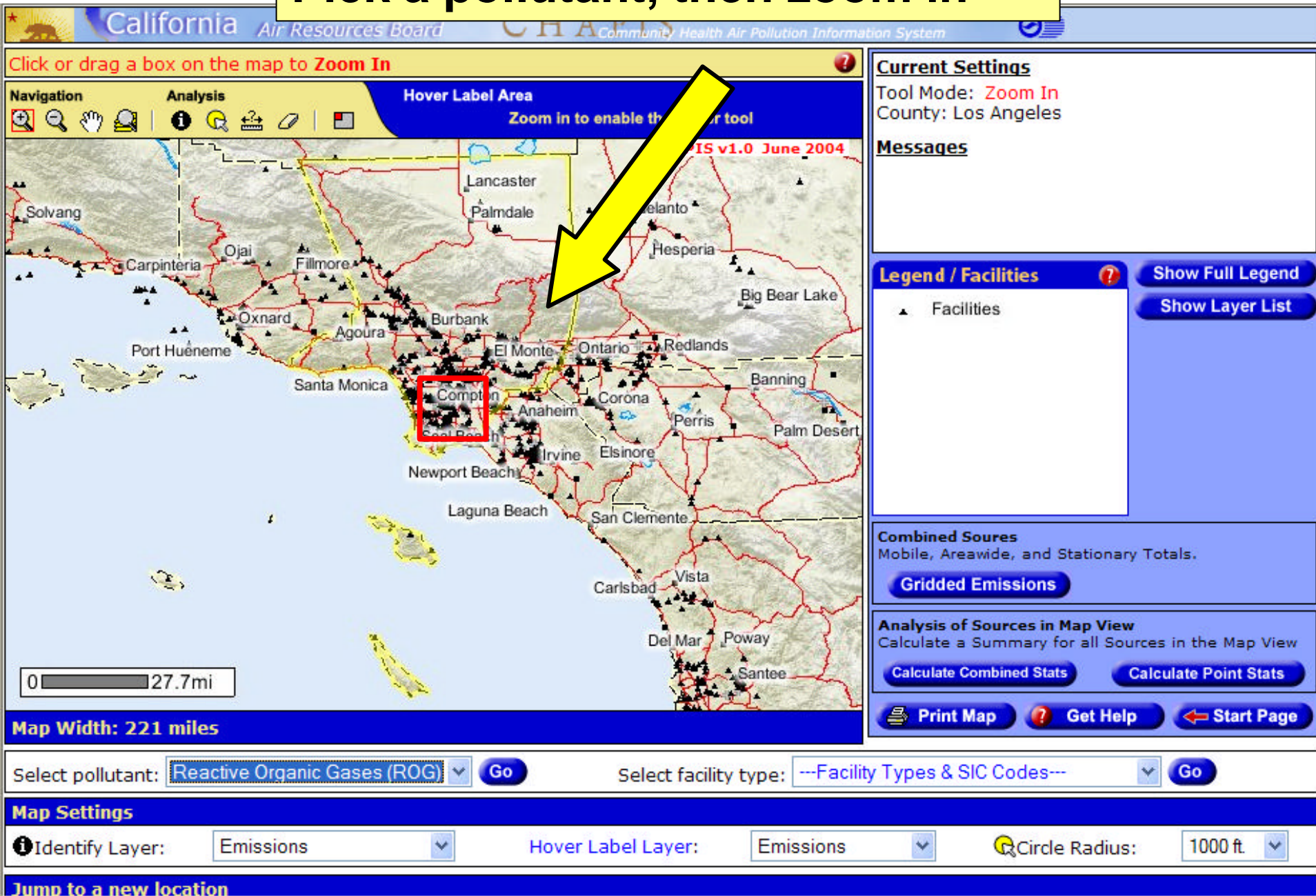
0 27.7mi

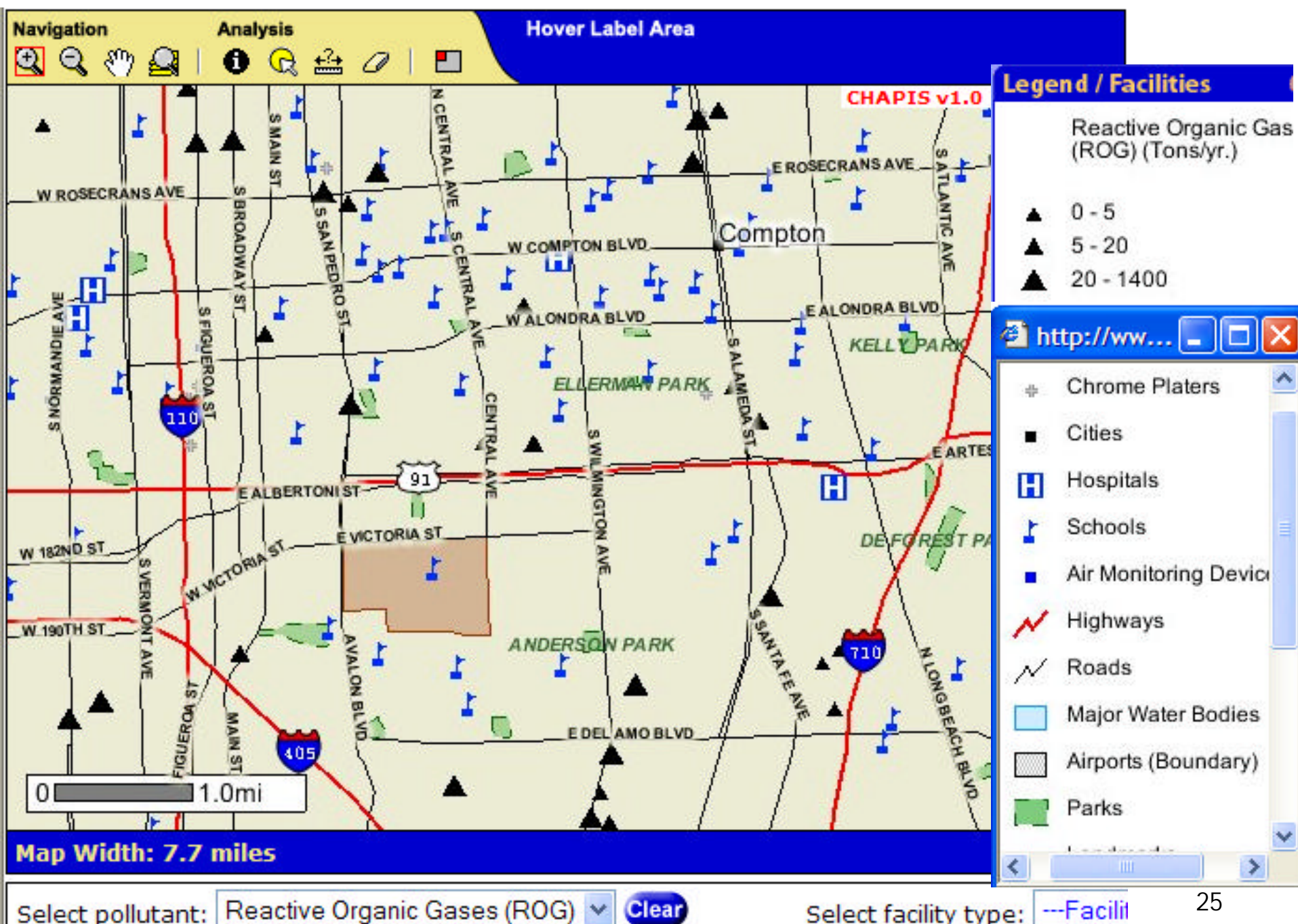
Map Width: 221 miles

Select pollutant: **Reactive Organic Gases (ROG)** **Go** Select facility type: **---Facility Types & SIC Codes---** **Go**

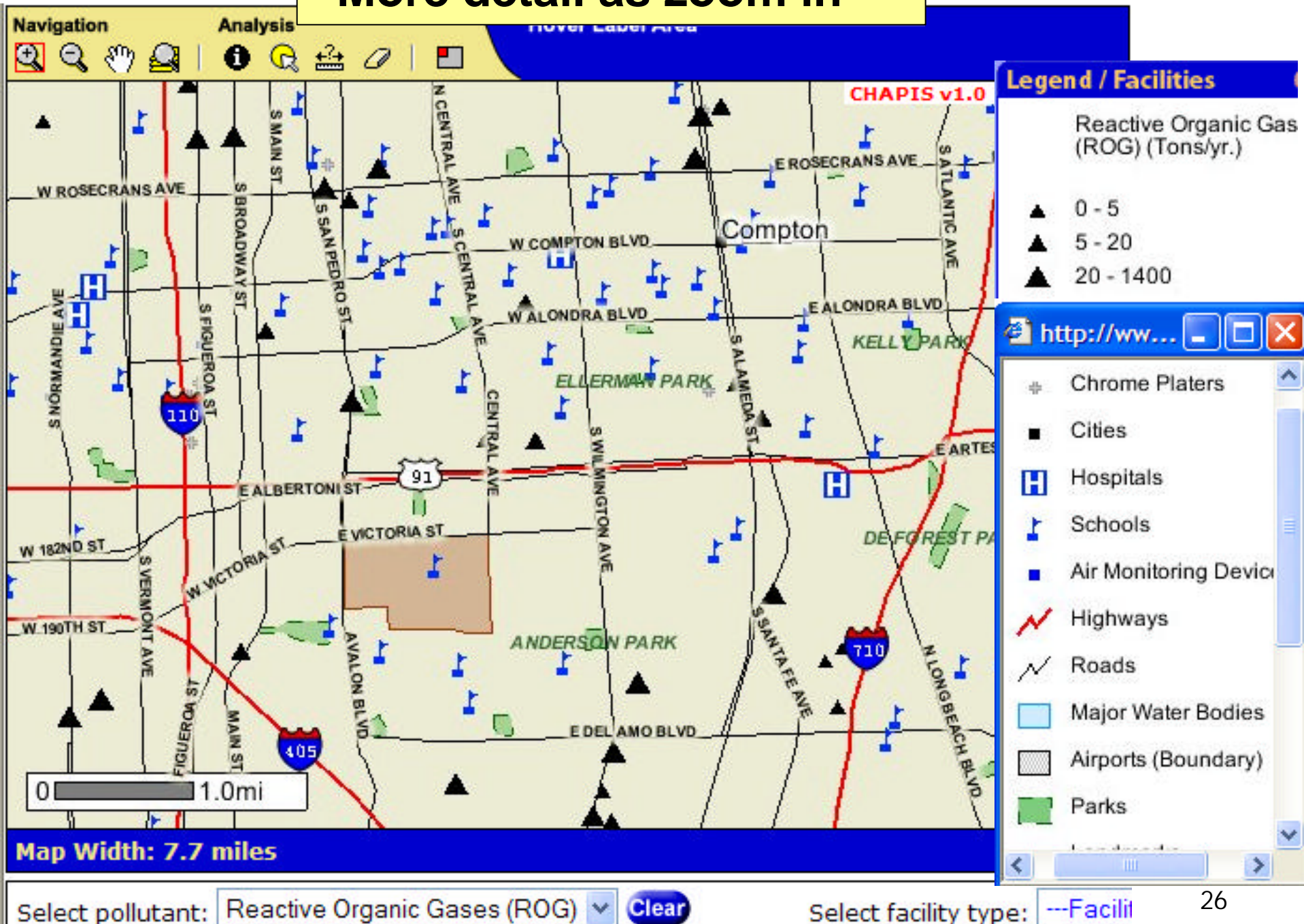
Map Settings
Identify Layer: Emissions **Hover Label Layer:** Emissions **Circle Radius:** 1000 ft

Jump to a new location

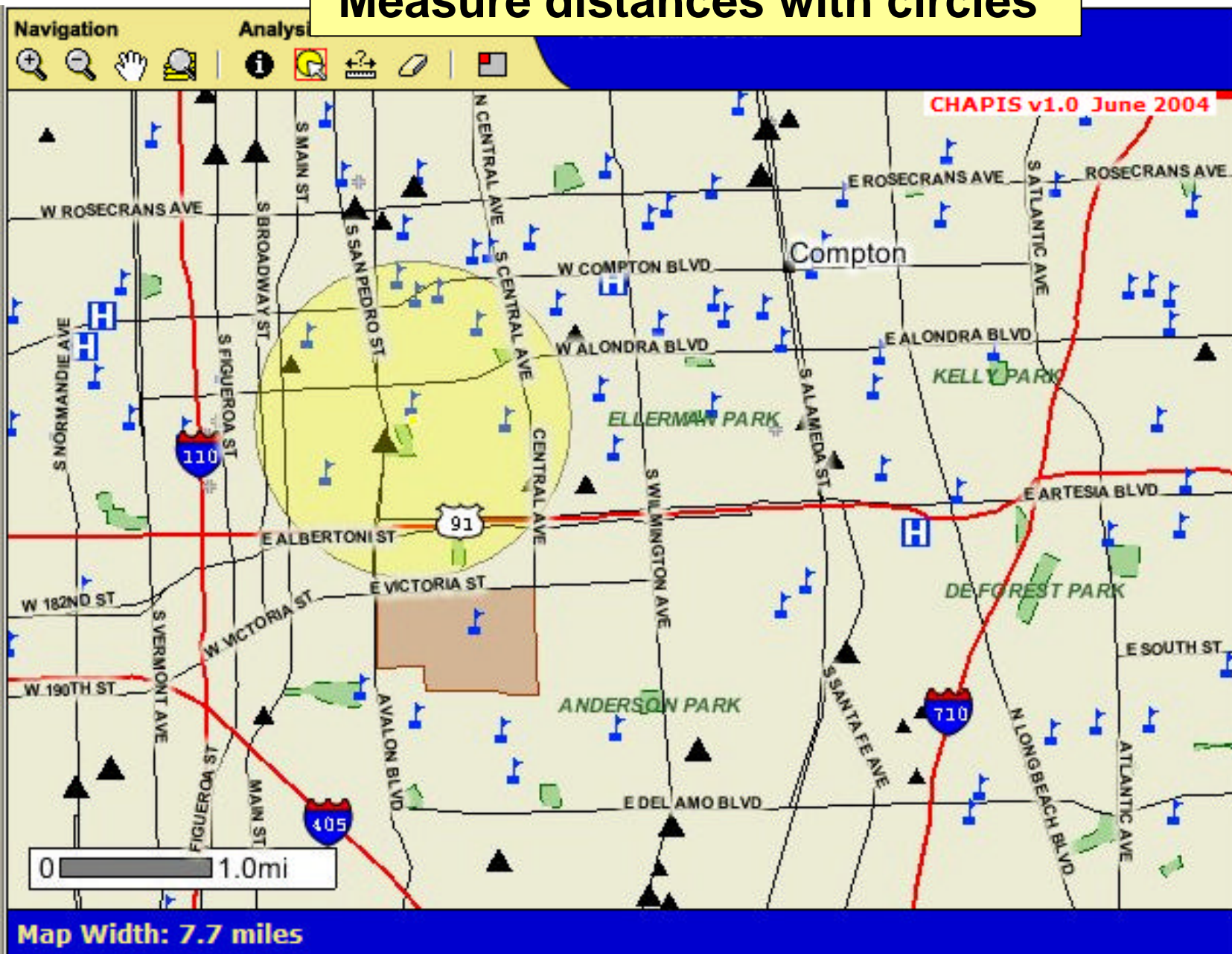


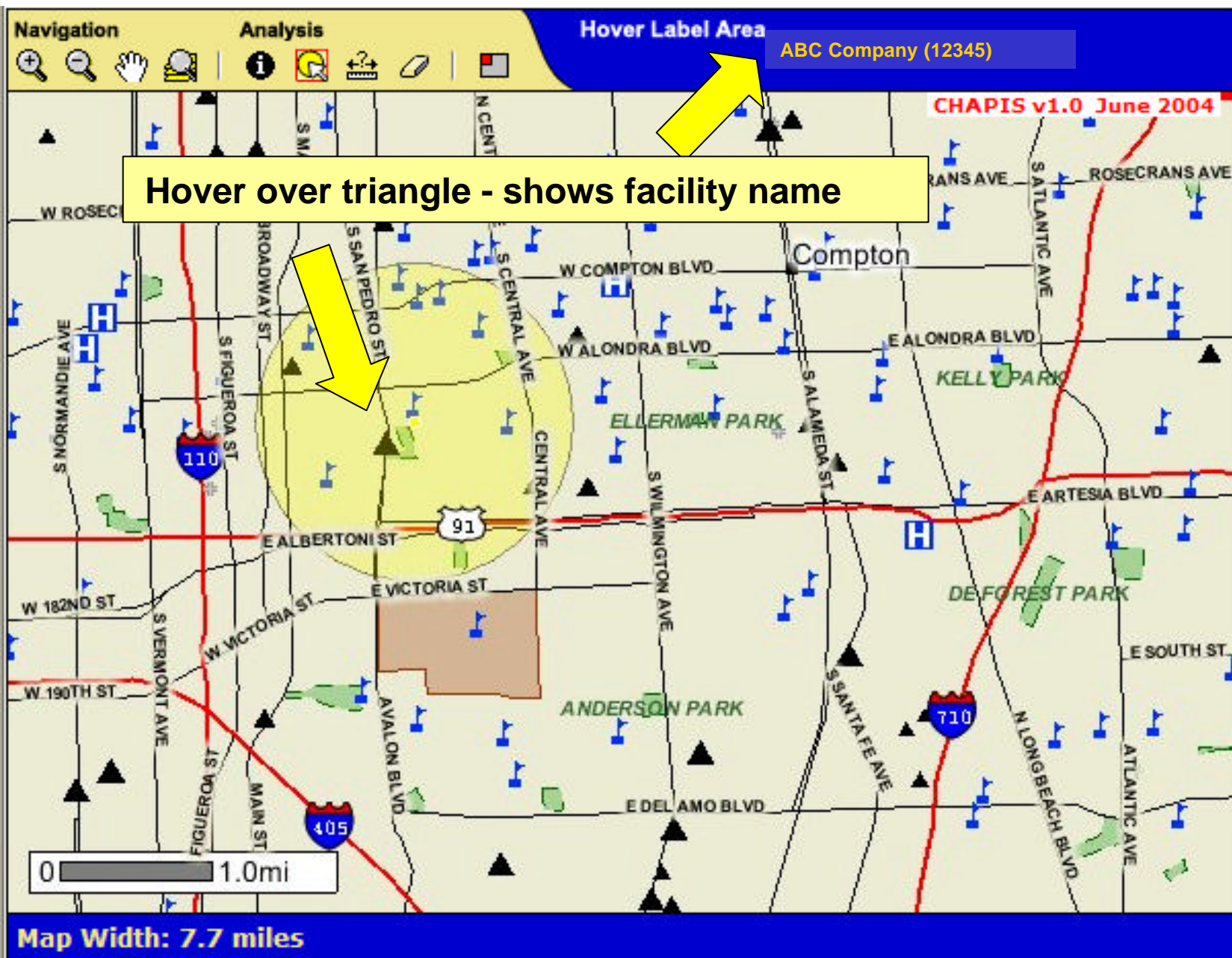


More detail as zoom in



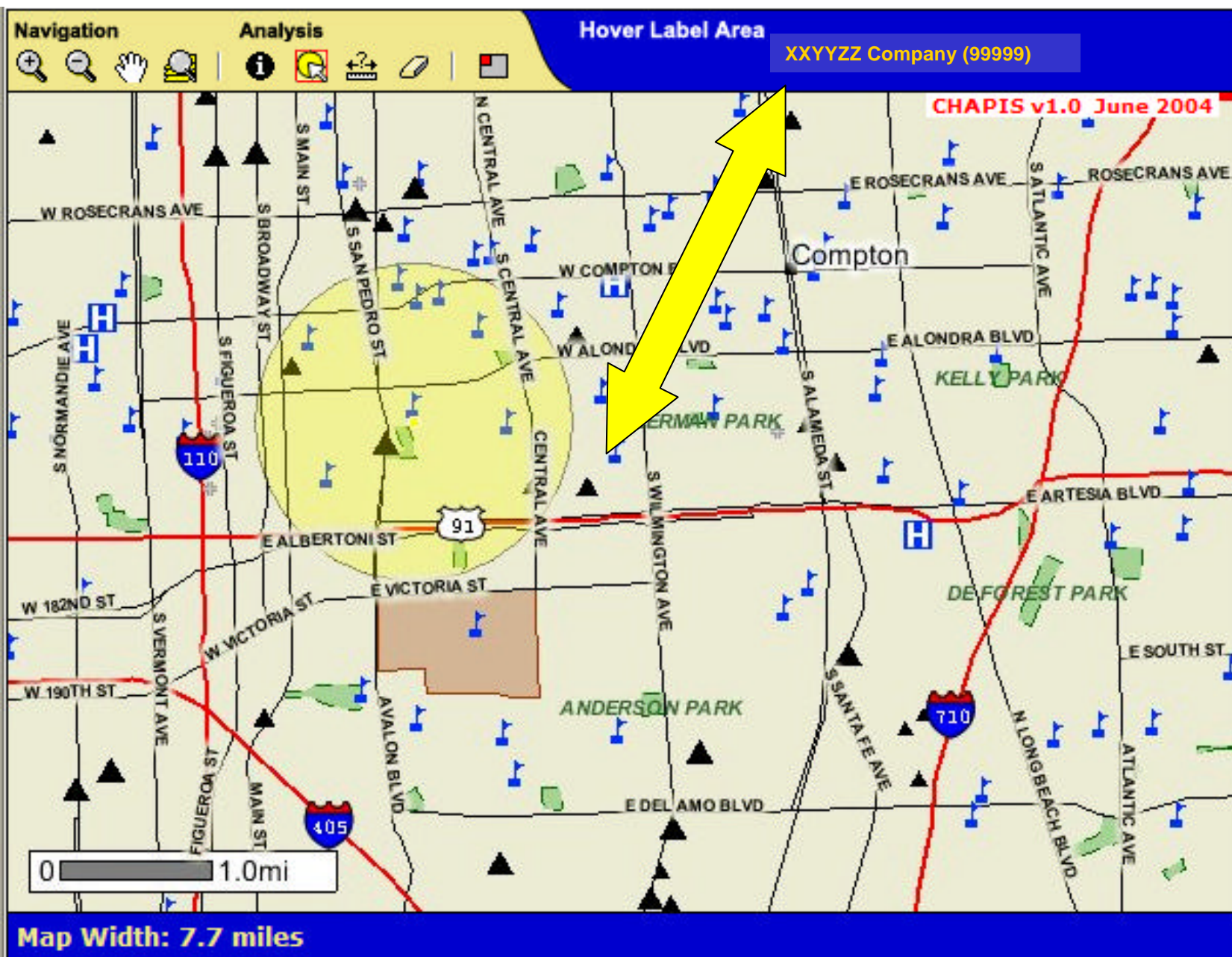
Measure distances with circles





Select pollutant:

Note: Facility names have been masked for this presentation



Select pollutant:

Note: Facility names have been masked for this presentation

Link to ARB's inventory for detailed emissions

California

Click on the map to Identify Layer

Navigation

Map Width: 7.7 mile

Select pollutant: Re

Map Settings

Identify Layer:

Jump to a new location

FACILITY DETAILS

Facility Information

Facility Name : ABC COMPANY INC. Facility ID : 6961
Street : 14113 N Mckinley Ave SIC Code : 5021
City : Los Angeles Zip : 90059 3592
Phone : (310) 638-6118
County : Los Angeles
Air Basin : South Coast
District : South Coast Aqmd

Emissions Data

	Pollutant	Emissions	Unit
Data from 2001 Download CSV file	TOG	37.2	Tons/Yr
	ROG	20.3	Tons/Yr
	CO	0	Tons/Yr
	NOX	0	Tons/Yr
	SOX	0	Tons/Yr
	PM	0	Tons/Yr
	PM10	0	Tons/Yr
	PM2.5	0	Tons/Yr

TOXIC DATA MAY COME FROM VARIOUS YEARS

Download CSV file	Formaldehyde	812.7	Lbs/Yr
	Methanol	812.7	Lbs/Yr
	To		

Note: Facility names have been masked for this presentation



Tool Mode: **Zoom In**
County: Los Angeles

Messages

Current grid size: 1 km

Legend / Facilities

Reactive Organic Gases
(ROG) (Tons/yr.)

- No Value
- 38.5 - 93.2
- 93.2 - 148
- 148 - 203

[.:Toggle Legend:.](#)

Combined Sources

Mobile, Areawide, and Stationary

Gridded Emissions

Analysis of Sources in Map View

Calculate a Summary for all Sources

[Calculate Combined Stats](#)

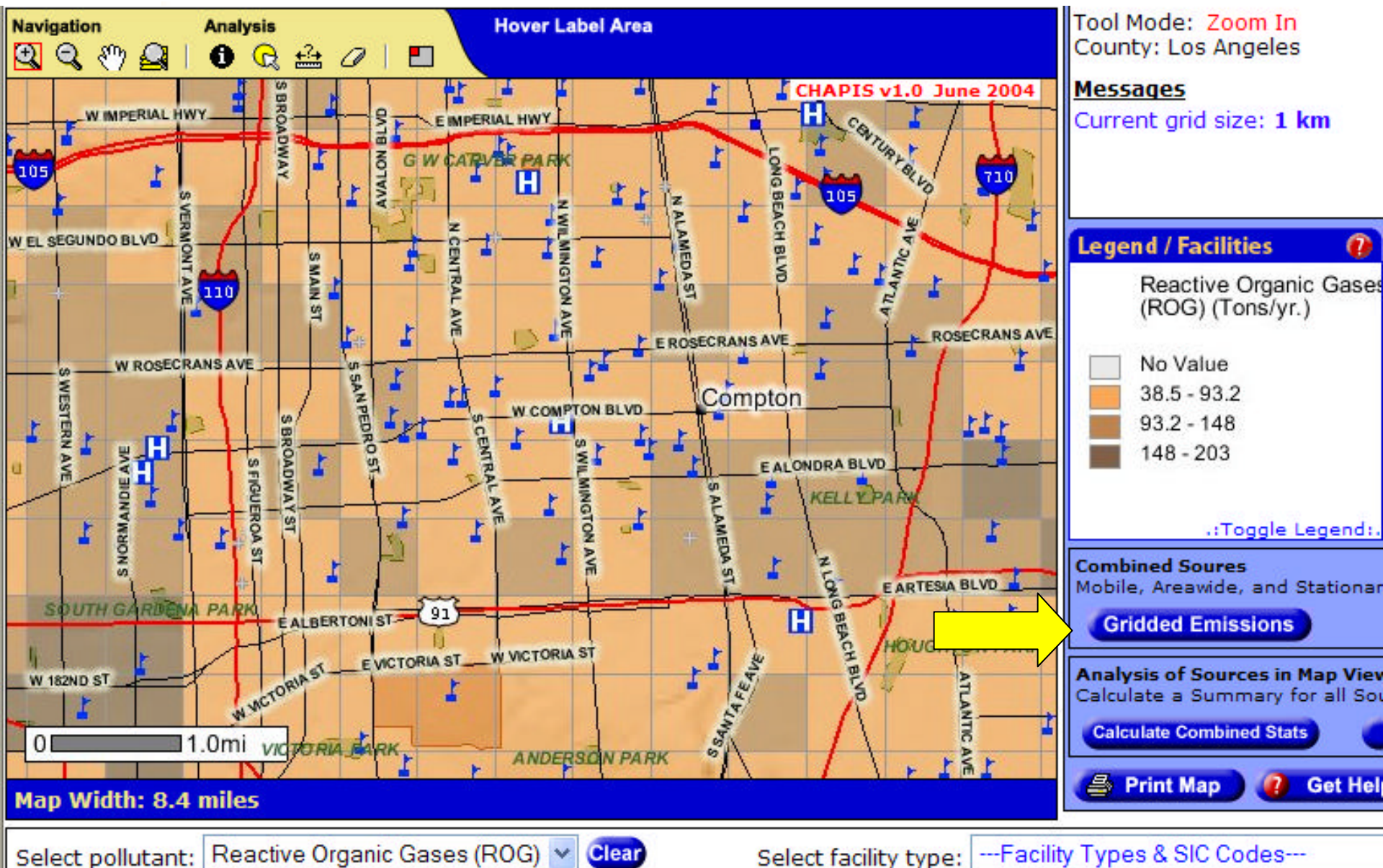
[Print Map](#)

[Get Help](#)

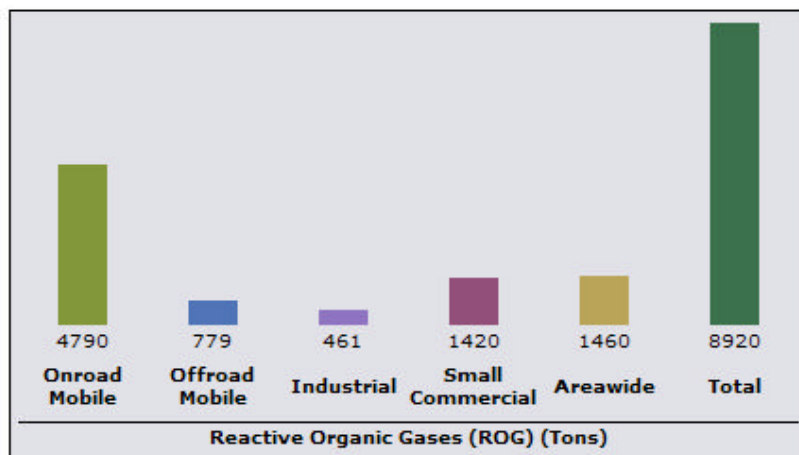
Select pollutant: **Reactive Organic Gases (ROG)** [Clear](#)

Select facility type: [---Facility Types & SIC Codes---](#)

Grids – combine mobile, areawide, and facility emissions



Combined Sources Within Map View:



Note: Only complete grid cells are reported. The cells included in this report are indicated on the map with a blue box. The number of grid cells included can be adjusted by zooming the map in or out.

All gridded source types and all available facility categories are included in the summary, for any WHOLE grid cells within the map view.

24 Reactive Organic Gases (ROG) industrial (point) emissions sources found

Maximum Value: 51.9 Tons/yr.

Average Value: 19.2 Tons/yr.

Total Emissions: 461 Tons/yr.

Note: Data and summary statistics in this table are for point (industrial) sources only.

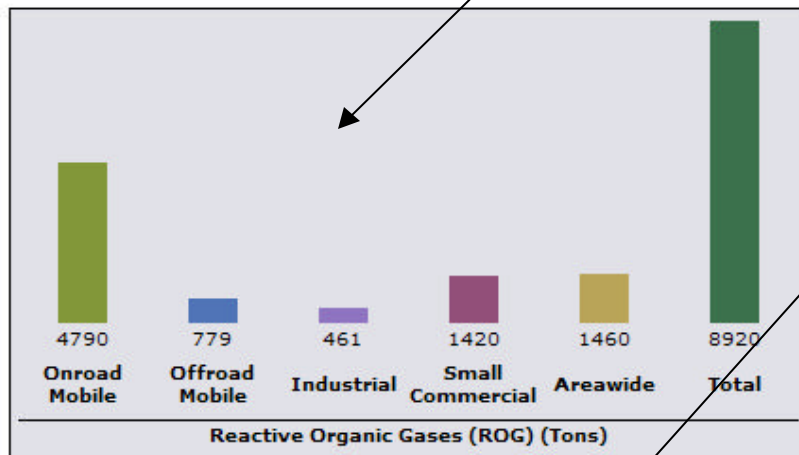
Only point sources that fall within WHOLE grid cells are included in this table.

Facil ID	Company	Address	Reactive Organic Gases (ROG) (Tons/yr)	SIC Code
800365	ABCD Company	13500 SOUTH BROADWAY LOS ANGELES, CA 90061	51.9	51 - Whlesle Trade-Nondurable Goods
122295	GHT Company	14104-14110 TOWNE AVE LOS ANGELES, CA 90061	49.6	30 - Rubber and Misc. Plastics Prod
119084	XYZ Company	1418 S. ALAMEDA ST.	20.0	33 - Transportation Equipment

Note: Facility names have been masked for this presentation

Summarize emissions in map view (graph and facility list)

Combined Sources Within Map View:



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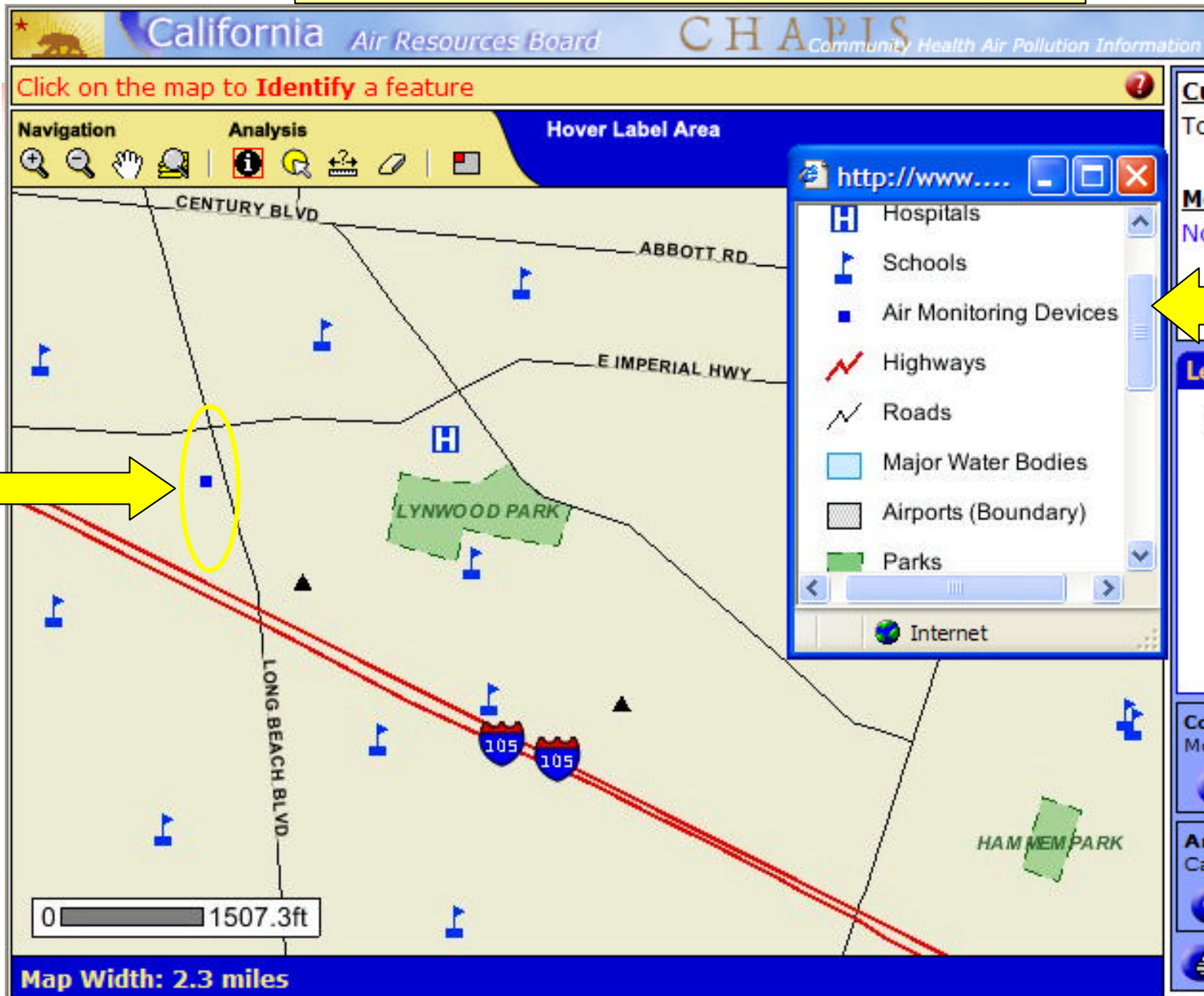
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CHAPIS has links to AQMIS



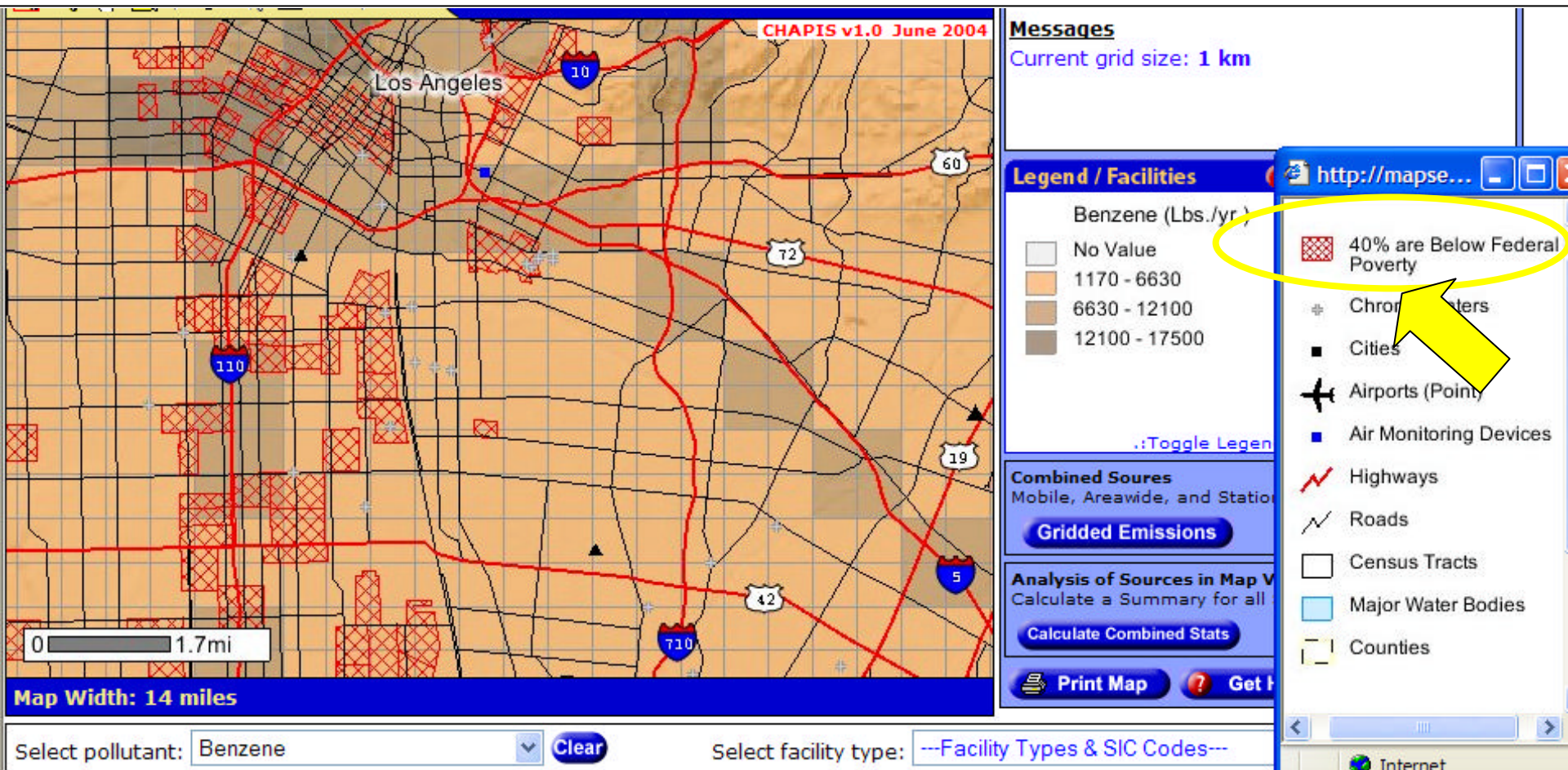


Future Directions for CHAPIS

- ◆ **Expand CHAPIS Emission Maps**
 - Add other emission sources and links
 - Overlay census demographic data
 - Incorporate multimedia data – air, water, waste

-- Cross-Hatch Over Colored Emission Grid --

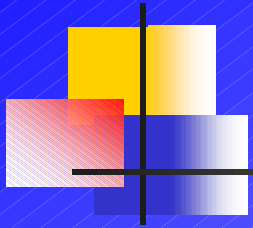
* Sample Census Data Design *



* Example of a Multimedia Map *

**Wilmington Area - Various Hazardous or Other Waste Generators and Sites
(Preliminary Data Assessment)**



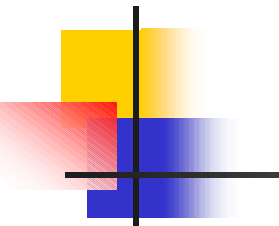


Resources and Links for Health Data and Information



Resources and Links for Health Data and Information

- ◆ Provide community access to spatial information on health summaries
- ◆ Promote public accessibility to health data
- ◆ Ensure the community can find information on health resources and services
- ◆ Commit to maintain and update links



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Resources for Health Outcomes

This page updated March 6, 2006

California Health Outcome Endpoints Data at the Zipcode Level

- [Death data](#)

California Department of Health Services

- [Asthma data](#)

California Health Interview Survey

- [Hospitalization discharge data](#)

Office of Statewide Health Planning and Development

- [Birth data](#)

Office of Health Information and Research

CHIS Tabular Data



California Health Interview Survey (CHIS)

Data by County in Tabular Form

HRSA Interactive Maps



HSRA Geospatial Data Warehouse

Health Resources and Services Administration

Interactive Health Maps



National Cancer Institute

Maps and Graphs at the National, State and County Level



Behavioral Risk Factor Surveillance System (BRFSS)
CDC National Center for Chronic Disease Prevention and Health



The Interactive Atlas of Reproductive Health

National Center for Disease Control and Prevention

Department of Health Services (DHS) links

[County Health Profiles - 2004](#)

[California Environmental Health Indicators](#)

[California County Asthma Hospitalization Chart Book - 2003](#)

[Atlas of low birthweight births in California 1995-1998](#)

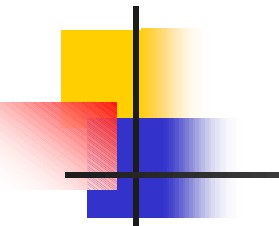
[DHS Research and Evaluation: Electronic Reports](#)

National Center for Health Statistics (NCHS) CDC Maps

[All NCHS - CDC Maps](#)

For more information please contact Dr. Barbara Weller by phone at (916) 324-4816 or by email at blweller@arb.ca.gov

Para información en Español contacte a Cynthia Garcia al (916) 327-8221 o al email cgarcia@arb.ca.gov



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Health Resources and Services Administration

Interactive Health Maps

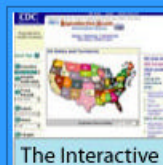


National Cancer Institute

Maps and Graphs at the National, State and County Level



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Conclusions

- ◆ **On-going commitment to improve tools and data**
- ◆ **Expand capabilities to address user needs**